



S/N 09/585,009

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	SMITH ET AL.	Examiner:	L. DOUYON
Serial No.:	09/585,009	Group Art Unit:	1751
Filed:	JUNE 1, 2000	Docket No.:	163.1269US01
Title:	MOLDED DETERGENT COMPOSITION AND METHODS FOR MANUFACTURING AND USING A MOLDED DETERGENT COMPOSITION		

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L. DOUYON  
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By

Name: Jennifer Bommentre

REQUEST FOR RECONSIDERATION

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

This is in response to the outstanding Office Action mailed on September 18, 2002.  
Reconsideration of the outstanding rejections is requested.

The invention relates to a method for manufacturing a molded detergent composition and to a molded detergent composition. The method for manufacturing a molded detergent composition includes steps of mixing a hydrated component and a hydratable component to provide a mixture, molding the mixture to provide a molded detergent composition, and solidifying the molded detergent composition as a result of movement of water of hydration from the hydrated component to the hydratable component to provide the molded detergent composition as a solid under conditions of room temperature and atmospheric pressure and having a melting point greater than about 30°C. The hydrated component has a melting point below about 100°C and comprises a transhydration product of an anhydrous material and water of hydration, wherein the anhydrous material has a melting point greater than about 300°C. The hydratable component, if it includes any water at all, includes water at a level of less than about 2 wt.% based on the weight of the hydratable component. In addition, the hydratable component is

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a component that successfully competes with the hydrated component for at least portion of the water of hydration provided as part of the hydrated component. According to independent claim 1, the step of mixing occurs without heating. According to independent claims 27 and 31, the method for manufacturing a molded detergent composition occurs in the presence of either an enzyme or a solvent.

The molded detergent composition according to the invention is provided as a result of the method for manufacturing a molded detergent composition. According to independent claim 16, the molded detergent composition is a result of mixing and molding a composition without heating during the steps of mixing and molding. Independent claims 29 and 33 refer to molded detergent compositions that include an enzyme or a solvent.

Although claims 27-34 do not explicitly require an absence of heating, it is clear from the specification beginning at page 10, line 15, that enzymes and solvents can be considered heat sensitive materials and that these claims require an absence of heating to an extent that damages the enzymes or removes the solvent. That is, these claims permit heating but not to an extent that damages the enzyme so that the molded detergent composition does not contain between about 0.01 wt.% and about 10 wt.% enzyme, or to an extent that causes removal of the solvent.

### **The Prior Art-Based Rejections**

The outstanding Office Action includes four prior art-based rejections. All four prior art-based rejections are traversed and each rejection is addressed below.

### **The Rejection Over *Ando et al.***

Claims 1-4, 6, 8, 9, 16-20, 22, and 25 stand rejected under 35 U.S.C. §102(b) as anticipated by *Ando et al.* (JP 09217100). This rejection is traversed.

The outstanding Office Action provided a Japanese language copy of JP 9-217100, a computer generated English language translation, and an English language abstract. The following discussion refers to the computer generated English language translation and the English language abstract.

*Ando et al.* describe a detergent composition for dishwashing that contains hydrate compounds from an aggregate of solid particles with an average particle size of 0.5 -2.0 mm and being a result of solidification without heating or pressure. See the abstract. It is understood

from the English language translation that aggregates are formed having a diameter of 0.5-2 mm and the aggregates are allowed to solidify together to create a solid containing void spaces. See the English language translation at paragraphs 14 and 32.

Although *Ando et al.* refer to a hydrate, *Ando et al.* fail to disclose or suggest using the hydrated component and the hydratable component according to the invention. According to claim 1 of the present invention, the hydrated component has a melting point below about 100°C and comprises a transhydration product of an anhydrous material and water of hydration wherein the anhydrous material has a melting point greater than about 300°C. Examples of the hydrated component are identified by the specification at page 2, lines 5-16 and include hydrated salts. It is pointed out that *Ando et al.* refer to anhydrous salts such as anhydrous sodium sulfate, anhydrous sodium carbonate, and anhydrous potassium carbonate at paragraph 22 of the English language translation. According to claim 1 of the present invention, the hydratable component includes water, if present at all, at a level of less than about 2 wt.% based on the weight of the hydratable component. Examples of hydratable components are identified by the specification at page 2, lines 17-25. Although *Ando et al.* refer to surfactants at paragraph 24 of the English language translation, there is no direction by *Ando et al.* to provide the surfactants with a water content of less than 2 wt.%. In fact, it is understood that surfactants identified by *Ando et al.* are often available in solutions containing water.

In view of the failure by *Ando et al.* to describe the hydrated component and the hydratable component according to the claimed invention, it is submitted that *Ando et al.* fail to disclose or suggest forming a solid as a result of movement of water of hydration from a hydrated component to a hydratable component according to the presently claimed invention.

Although *Ando et al.* refer to a detergent composition that contains hydrated compounds, it is submitted that there is no disclosure that the compositions described by *Ando et al.* solidify as a result of the movement of water of hydration from a hydrated component to a hydratable component to provide a molded detergent composition according to the claimed invention.

Because *Ando et al.* fail to disclose or suggest a competitive hydration reaction, it is submitted that there is no way the outstanding Office Action can contend that the resulting composition described by *Ando et al.* satisfies the claimed molded detergent composition. According to the claimed invention, the molded detergent composition solidifies as a solid as a result of movement of water of hydration from the hydrated component to the hydratable

component. It is submitted that the outstanding Office Action fails to explain how the aggregates described by *Ando et al.* or the resulting molded composition containing voids anticipates or would have suggested the presently claimed composition.

In view of the above comments, withdrawal of the rejection over *Ando et al.* is requested.

### **The Rejection Over *Scepanski***

Claims 16, 26, 29, 30, 33, and 34 stand rejected under 35 U.S.C. §103(a) over *Scepanski* (U.S. Patent No. 5,670,473). This rejection is traversed.

*Scepanski* describes a method for forming a solid cleaning agent from hydrated forms of salts that includes heating and melting the hydrated forms of salts. The Examiner's attention is directed to *Scepanski* at column 3, lines 30-32 and lines 50-55. By providing the hydrated forms of salts as melts, it is submitted that the hydrated forms of salts are no longer hydrates. By melting the hydrated forms of salts, the crystalline structure of the hydrated forms of salts disappears and the water of hydration becomes free water. According to *Scepanski*, solidification occurs after mixing with additional ingredients and allowing the composition to cool. See *Scepanski* at column 3, lines 40-43, and column 6, lines 25-27.

The solidification mechanism of *Scepanski* is not entirely clear. It is believed that as the composition cools, the salts rehydrate and solidify. In contrast, the present invention provides for solidification as a result of a competitive hydration reaction where water of hydration moves from the hydrated component to the hydratable component. This type of mechanism is not present according to *Scepanski* because the solidification process of *Scepanski* begins with a composition that does not contain water of hydration since the hydrated forms of salts are melted.

The outstanding Office Action recognizes that *Scepanski* fails to teach the claimed method for manufacturing a molded detergent composition. However, it is understood that the outstanding Office Action relies upon a theory of inherency in order to conclude that the composition resulting from *Scepanski* satisfies the presently claimed composition. It is well settled that inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency. See *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed.Cir. 1991). It is submitted that the Examiner has failed to satisfy the burden of showing that the presently

claimed composition results from the disclosure of *Scepanski*. In fact, the applicants have explained why the presently claimed composition is different from the composition disclosed by *Scepanski*. According to the presently claimed molded detergent composition, the solidification results from movement of the water of hydration from the hydrated component to the hydratable component. In contrast, the solidification according to *Scepanski* results from cooling a melt. It is submitted that there is no reason to expect that the resulting solid described by *Scepanski* would satisfy the presently claimed molded detergent composition. Furthermore, it is submitted that one having ordinary skill in the art would not have received a suggestion to modify *Scepanski* to achieve the presently claimed molded detergent composition.

In view of the above comments, withdrawal of the rejection over *Scepanski* is requested.

#### **The Rejection Over *Ando et al.***

Claims 5, 7, 14, 15, 21, 23, 24, 26, and 31-34 stand rejected under 35 U.S.C. §103(a) over *Ando et al.* This rejection is traversed.

It is submitted that *Ando et al.* fail to disclose or suggest the present invention for the reasons identified above with respect to the rejection of claims 1-4, 6, 8, 9, 16-20, 22, and 25. Accordingly, withdrawal of the rejection over *Ando et al.* is requested.

#### **The Rejection Over *Ando et al.* and *Scepanski***

Claims 10-13 and 27-30 stand rejected under 35 U.S.C. §103(a) over *Ando et al.* and *Scepanski*. This rejection is traversed.

It is submitted that *Ando et al.* fail to disclose or suggest the claimed invention for the reasons identified above. *Scepanski* fails to cure the defects identified above with respect to *Ando et al.* It is pointed out that *Scepanski* is directed at forming a solid composition as a result of heating and melting. The Examiner's attention is directed to *Scepanski* at column 3, lines 30-32. In contrast, *Ando et al.* are directed at solidification in the absence of heating. The Examiner's attention is directed at the English language translation of *Ando et al.* at paragraph 8. Accordingly, it is submitted that one having ordinary skill in the art would not have received the suggestion from *Ando et al.* to modify *Scepanski* because *Ando et al.* is concerned with solidification in the absence of heat whereas *Scepanski* is concerned with solidification as a result of the application of heat. As a result, the disclosures of *Ando et al.* and *Scepanski* would

not have been combined, and the claimed invention would not have been obvious from *Scepanski* and *Ando et al.* Accordingly, withdrawal of the rejection over *Ando et al.* and *Scepanski* is requested.

It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, MN 55402-0903  
(612) 332-5300

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Dennis R. Daley  
Dennis R. Daley  
Reg. No. 34,994  
DRD:jjb